NOTE ON THE CLASPERS OF HEPTANCHUS.

By W. A. Haswell, M.A., B. Sc.

Plate X.

In most *Elasmobranchii* there is found at the base of the clasper a cavity lined either completely (Sharks), or in a special position (Rays), with gland-cells secreting a sort of sebaceous material.* This cavity is excavated in the substance of the posterior lobe of the pelvic fin, and, opening from it, is a groove which runs along the clasper to its apex. In *Heptanchus indicus*, however, of which I have recently had the opportunity of examining fresh specimens, these organs present an arrangement which is in some respects entirely unlike that observed in other Elasmobranchs. The clasper itself has the form usual in Sharks. But the longitudinal groove which runs along its dorsal border is pushed in, as it were, in its proximal portion to form a deep, loose, vascular pouch of skin. Proximally the gland ends blindly. Enclosing the pouch and the claspers themselves is the posterior portion of the pelvic fin, which has the form of a wide sheath open internally and supported by the posterior fin-rays. When the two sheaths of opposite sides are drawn a little in towards one another they form a complete covering for the organs, only the tips being exposed. The inside of this sheath is lined with soft, highly vascular skin, devoid of scales and apparently glandular.

What purpose is served by this unusual arrangement it would be difficult to determine in the absence of any exact information as to the functions of the various parts in other forms; but the conjecture may be hazarded that the pouch serves as a reservoir

* See K. R. Petri, Die Copulationsorgome der Plagiostomen, Zeitschr. f, wiss. Zool. xxx., 2 pp. 288—335, pl. xvi.—xviii.

for the secretion of the gland, and that the produced and sheath-like posterior lobe of the pelvic fin serves to enclose and protect the pouch and the claspers.

Explanation of Plate X.

Fig. 1. The clasper of *Heptanchus indicus* seen from the right side, the apex of the right pelvic fin drawn forward and the right clasper drawn backwards. Drawn from a photograph, reduced to one-third.

Fig. 2. The left clasper from the front, the posterior lobe of the pelvic fin drawn to one side.

a—entrance to glandular pouch. *b*—outer surface of pouch. *b'*—apex of clasper. *c*—apex of posterior lobe of pelvic fin. *d*—vascular inner surface of the posterior lobe of the pelvic fin forming sheath for clasper. *e*—pelvic fins. *f*—anal fin. *g*—dorsal fin. *h*—opening of cloaca. *k*—urogenital papilla. *l*—abdominal pores, a rod passed into the left.

NOTES AND EXHIBITS.

Mr. W. A. Haswell read the following note:—

In part 7, of the Transactions of the Linnean Society (September, 1883), is a paper by Mr. A. G. Bourne "On certain Points in the Anatomy of the Polynoina, and on *Polynoë (Lepidonotus, Leach) clava* of Montagu," in which occurs the following foot-note:—

"Since this was written Mr. W. A. Haswell, M.A., B.Sc., in "A Monograph of the Australian Aphroditea," (Proc. Linn. Soc., New South Wales, vol. vii.) has described the segmental organ in *P. (Antinoe) praeclara*, and *P. (Antinoe) Wahlsi* allied to *P. pellucida*, Ehlers. That author has also arrived at the conclusion that Ehlers has not seen the true segmental organs, but only intestinal caeca, he describes the former as opening at the ventral tubercles, but does not give any figures."